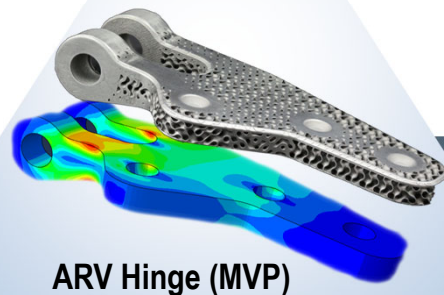
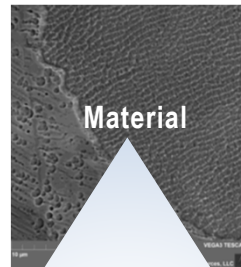




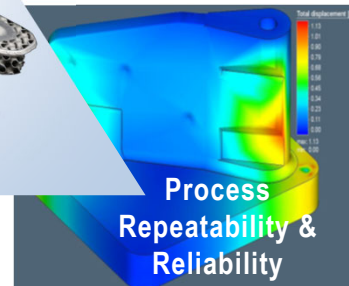
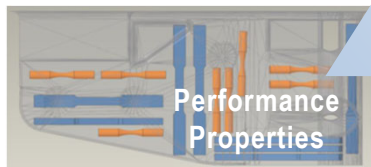
# Quality Made Transitions

## PAYOFF

- QM will reduce time for qualification for critical parts from 156 days to <100 days (standard part geometries)
- Estimated cost savings of 25-35% based on reduced time and material testing
- Enables the capability for rapid one-off or low-volume production to meet platform schedule and cost benchmarks for suite of AM components
- End to end framework from CAD to part (AM hardware and software will transition to NAVAIR-Lakehurst, NAVSEA-Carderock, and USMC-Albany)

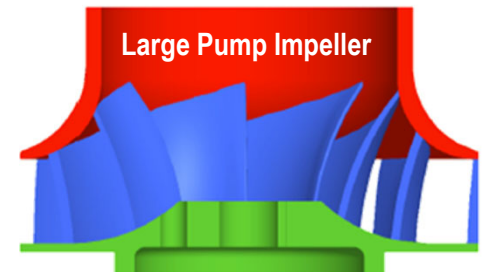


ARV Hinge (MVP)



## TECHNOLOGY PULL

- NAVAIR coordination with GE aviation for engine part demonstration part.
- SSP – LM FBM highly coordinated activities and involvement. Strong business case study for continued use of AM including multiple candidate parts (VADM J. Wolfe TPOC: Ethan Hess)
- NAVSEA 08 – Large Ti-64 pump impeller targeting second shipset COLUMBIA (qualified AM process by FY23). Part demonstration will provide technical qualification data. (TPOC: Stephen Clement)



- Framework demonstration for USMC 316L MVP from ARV program. Planned installation and testing on prototype ARV SAIC vehicle
- Topology optimized design with CTC tools (40% weight savings)
- CAD model to printed part < 1 month.